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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/808,025	03/15/2001	Cedric Lapaille	Q63534	4899

23373 7590 11/03/2005

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EXAMINER

ELAHEE, MD S

ART UNIT	PAPER NUMBER
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2645

DATE MAILED: 11/03/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/808,025

Applicant(s)

LAPAILLE ET AL.

Examiner

Md S. Elahee

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 03 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 19 August 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-15 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-15 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Amendment

1. This action is responsive to an amendment filed 08/19/05. Claims 1-15 are pending.

Response to Arguments

2. Applicant's arguments filed regarding claims 1-15 have been fully considered but they are not persuasive.

Regarding claims 1, 7 and 13, the Applicant argues on page 7, lines 16-18 that “Lyles does not disclose a telecommunication system in which calls (effected by cells or packets) are made from terminals to a connection station and each terminal includes a plurality of connections.” The examiner disagrees with this argument. The applicant didn't claim the citation “a telecommunication system in which calls (effected by cells or packets) are made from terminals to a connection station” in the body of the claims. Lyles does disclose a telecommunication system (see col.9, lines 35-60) in which requests [i.e., calls] (effected by cells or packets) are made from terminals to a connection station (see col.2, lines 9-15) and each terminal includes a plurality of connections (see fig.2, channels 200, 205, physical coax 120). The Applicant further argues on page 8, lines 8-10 that “Lyles does not teach or suggest that the terminal equipment has a plurality of incoming connections providing cells or packets used to effect said calls to said connection station.” The examiner disagrees with this argument. The applicant didn't claim the citation “the terminal equipment has a plurality of incoming connections” in the body of the claims. Lyles does disclose that the terminal equipment has a plurality of incoming channels [i.e., connections] (see fig.2, channels 200, 205, physical coax 120) providing cells or packets used to effect the requests [i.e., calls] to the head-end controller

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[i.e., connection station] (see col.2, lines 3-14, col.6, lines 44-67, col.7, lines 1-6, 11, 12). Thus the rejection of the claims in view of Lyles and Wallmeier remain.

Regarding claims 8, 9 and 14, the Applicant argues on page 9, lines 7-14 that "In particular, Ding is directed to allocating internal channels of a host computer (i.e., a node) as needed by application programs running on a processor of the host computer. Accordingly, the resource allocation signal of Ding is transmitted by an application to a (streamer) process running on the same host computer. On the other hand, Lyles teaches transmitting a transmission authorization request signal from a terminal unit to a head-end unit. Thus, Applicant respectfully submits that the teachings of Ding relied on by the Examiner are not related or relevant to the system/method of Lyles or the present invention." The examiner disagrees with this argument. Examiner relied upon Ding only for the teaching of the resource allocation signal that is received from the management unit represents a number of cells to be transmitted and the means for allocating resources to each connection select the connections that will be able to transmit a cell. Thus the rejection of the claims in view of Lyles, Wallmeier and Ding will remain.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claim 7 recites the limitation "the connection station" in line 5 of the claim. There is insufficient antecedent basis for this limitation in the claim.

Claim 13 recites the limitation "said connection station" in line 4 of the claim. There is insufficient antecedent basis for this limitation in the claim.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

7. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

8. Claims 1-7, 10-13 and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lyles et al. (U.S. Patent No. 5,917,822) in view of Wallmeier (U.S. Patent No. 6,553,033).

Regarding claim 1, Lyles teaches that a telecommunication system in which a plurality of terminal equipment units 210 or network access units [i.e., terminals] communicate with a head-end controller [i.e., connection station] (fig.1, 3; col.1, lines 57-67, col.2, lines 1-14).

Lyles further teaches that a bandwidth allocation unit [i.e., management unit] determines the allocation of resources for requests [i.e., calls] from each terminal equipment unit to the head-end controller (fig.1, 3; col.1, lines 57-67, col.2, lines 1-14, 34-37, col.6, lines 47-56).

Lyles further teaches that at least some of the terminal equipment units include a plurality of channels [i.e., incoming connections] (fig.2, channels 200, 205, physical coax 120), providing cells or packets used to effect the calls to the head-end controller, the allocation of resources is determined cell by cell or packet by packet in each connection (col.2, lines 3-14, col.6, lines 44-67, col.7, lines 1-6, 11, 12).

Lyles further teaches that the bandwidth allocation unit includes means for allocating communication resources to each terminal equipment unit 210 according to the total number of cells or packets waiting in each terminal equipment unit 210 (col.3, lines 33-38, col.6, lines 44-67, col.7, lines 1-6, col.9, lines 20-25, 35-41, col.11, lines 27-67).

Lyles further teaches that the allocation of resources by the management unit is inherently independent of the number of connections of each terminal (col.3, lines 33-38, col.6, lines 44-67, col.7, lines 1-6, col.9, lines 20-25, 35-41, col.11, lines 27-67).

Lyles further teaches that each terminal equipment unit 210 encompasses multiple physical devices such as terminal adapters (see col.9, lines 35-41), each terminal equipment unit may be multiplexing multiple flows (see col.3, lines 28-36, 57-61) and a Weight (f) [i.e., weighting coefficient] allocated to flow f of each terminal equipment unit 210 (see col.11, lines

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27-67). However, it is not clear whether Lyles teaches that each terminal includes means for allocating resources to each connection and a weighting coefficient allocated to each connection. Wallmeier teaches that each terminal includes means for allocating resources to each connection and a weighting coefficient allocated to each connection (fig.1-3; col.1, lines 35-48, col.2, lines 18-30, 33-35, col.3, lines 3-7, 15-20, 29-33, 41-54, 61-67, col.4, lines 1-8). Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Lyles to incorporate each terminal including means for allocating resources to each connection and a weighting coefficient allocated to each connection as taught by Wallmeier. The motivation for the modification is to have doing so for the purpose of preventing a loss of ATM cells.

Regarding claims 2 and 10, Lyles teaches that the Weight(f) [i.e., weighting coefficient] allocated to each connection in a terminal depends on the quality of service of the channel (i.e., connection) (col.2, lines 38-44, col.3, lines 32-36, col.7, lines 1-6, col.10, lines 24-29, col.11, lines 27-67).

Regarding claim 3, Lyles teaches that the Weight(f) [i.e., weighting coefficient] allocated to each terminal is inherently the sum of weighting coefficients allocated to each connection of the terminal (col.11, lines 27-67).

Regarding claim 4, Lyles teaches that the management unit includes means for allocating to each terminal a number of cells to be transmitted and the start and finishing (i.e., end) of transmission times for the terminal (col.9, lines 61-67, col.10, lines 1-7, 46-55, col.11, lines 27-67, col.12, lines 1-17).

Regarding claim 5, Lyles teaches that the Weight(f) [i.e., weighting coefficient] allocated to each terminal determines the required time period between successive transmission times for the terminal (col.11, lines 27-67).

Regarding claim 6, Lyles teaches that the Weight(f) allocated to each connection of a terminal determines the time period between the transmission times of two successive cells of the connection (col.9, lines 61-67, col.10, lines 1-7, 46-55, col.11, lines 27-67, col.12, lines 1-17)

Regarding claim 7 is rejected for the same reasons as discussed above with respect to claim 1. Furthermore, Lyles teaches means for periodically receiving from the bandwidth allocation unit an authorization signal 410 (i.e., signal) representing the communication resources allocated to the terminal equipment unit 210 (col.6, lines 47-67, col.7, lines 1-25, col.9, lines 55-67, col.10, lines 1-7).

Regarding claim 11, Lyles teaches transmitting two successive cells of the same channel (i.e., connection) at times separated by a time period that depends on the weighting coefficient allocated to the channel (col.11, lines 27-67, col.12, lines 1-17).

Regarding claim 12, Lyles teaches that the time period between the transmission of two successive cells of the same connection inherently depends on the reciprocal of the Weight(f) allocated to the corresponding connection (col.11, lines 27-67, col.12, lines 1-17). (Note; Here, Weight(f) is inversely proportional to the time period see col.11, lines 60-63)

Regarding claim 13 is rejected for the same reasons as discussed above with respect to claim 1. Furthermore, Lyles teaches that the unit includes means for receiving from each terminal a burst [i.e., symbol] representing the total number of packets awaiting transmission (col.7, lines 11, 12).

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9. Claims 8, 9 and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lyles et al. (U.S. Patent No. 5,917,822) in view of Wallmeier (U.S. Patent No. 6,553,033) further in view of Ding et al. (U.S. Patent No. 5,699,361).

Regarding claims 8 and 14 are rejected for the same reasons as discussed above with respect to claim 4. Furthermore, Lyles in view of Wallmeier fails to teach that the resource allocation signal that is received from the management unit represents a number of cells to be transmitted and the means for allocating resources to each connection select the connections that will be able to transmit a cell. Ding teaches the request [i.e., resource allocation signal] that is received from the streamer process 330 [i.e., management unit] represents a number of packets [i.e., cells] to be transmitted and the means for allocating resources to each channel [i.e., connection] select the channels that will be able to transmit a cell (col.18, line 66-col.19, line 18). Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Lyles in view of Wallmeier to allow the resource allocation signal that is received from the management unit represents a number of cells to be transmitted and the means for allocating resources to each connection select the connections that will be able to transmit a cell as taught by Ding. The motivation for the modification is to have the override condition in order to transfer the packets from the buffer.

Regarding claim 9 is rejected for the same reasons as discussed above with respect to claim 8. Furthermore, Lyles teach determining the transmission time of each cell (col.11, lines 27-67, col.12, lines 1-17).

Conclusion

10. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Lee (U.S. Pub. No. 2004/0203743) teach Bandwidth allocation method and apparatus and Ruszczyk et al. (International Pub. No. WO 99/09689) teach SYSTEM, DEVICE, AND METHOD FOR SCHEDULING IN A COMMUNICATION NETWORK.

11. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Md S. Elahee whose telephone number is (571) 272-7536. The examiner can normally be reached on Mon to Fri from 8:30am to 5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Fan Tsang can be reached on (571) 272-7547. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

M.E.

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October 20, 2005



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